Recorded
8-7-64 cmj

FEDERAL BUREAU OF INVESTIGA
UNITED STATES DEPARTMENT OF J

Laboratory Work Sheet

Re: LEE HARVEY OSWALD, aka
IS - R - CUBA

Examination requested by: ~~President's Commission~~

Examination requested: ~~Photographic Macroscopic~~ Spectrographic
Firearms

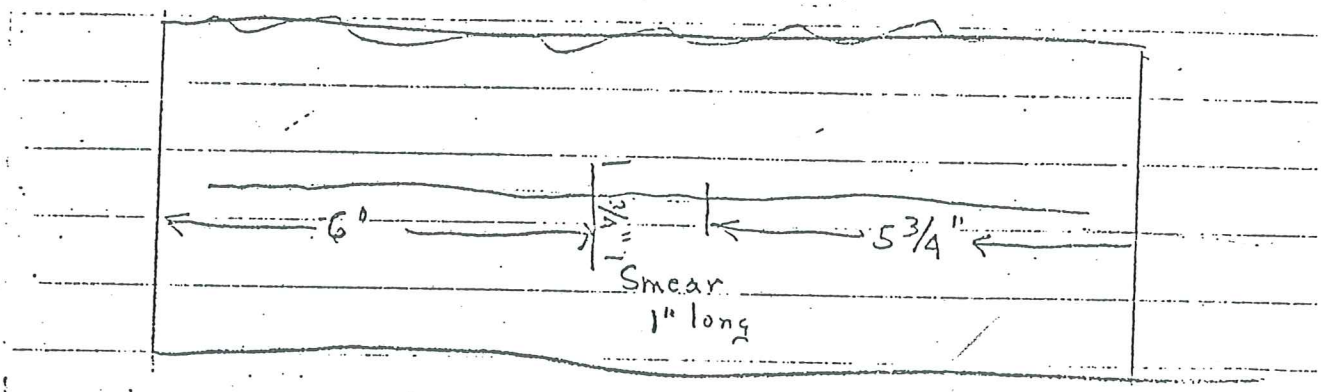
Result of Examination:

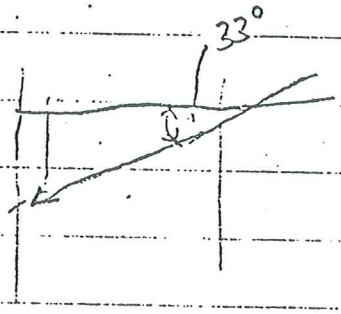
EL

Specimens submitted for examination

Q609 ~~Request for location and examination of mark on curbing at assassinat site~~ Piece of curbing.

Small foreign metal smears (see attached for location) were run spectrographically (Gavell-Ash) & found to be essentially lead with a trace of antimony - could be bullet metal. No copper observed.


6"
5 3/4"
Smear
1" long


33°

Atomic Emission
Sb 123 · Comp: T ½

	Sample weight ± mg.	Sb ppm	Deviation from mean: D	D²	Standard deviation
Q_1	A 7.16	643	− 54	2916	
	B 4.2	636	− 61	3721	
	C 1.79	750	+ 53	2809	
	D 1.24	749	+ 52	2704	
	E 3.34	725	+ 18	64	
	Avg	697			17.87
	Q_1 = ** 1.16	749			
Q_2	A 39.75	521	− 13	169	
	B 21.6	521	− 13	169	
	C 5.84	577	+ 44	1936	
	D 3.68	515	− 19	361	
	Avg	534			29.65
$Q_{3,5}$					
	S 3.22	555	− 6	36	
	L_a 6.85	552	− 9	81	
	L_b 21.15	536	− 29	841	
	L_c .825	606	+ 45	2025	
	Avg	561			36.52
Q_4	A 1.92	690	+ 18	324	
	B 2.07	662	− 19	196	
	S 1.39	677	+ 1	1	
	Avg	676			16.12

Statistical Analysis

	weight* Mg	SS	Deviation D	D^2	Standard Deviation
	10.65	543	- 19	361	
a	9.70	532	+ 20	400	
La	5.78	546	- 16	256	
Lb	3.77	552	- 10	100	
Lc	2.85	587	+ 25	625	
Avg		562			20.87

* Represents the weight after surface water removed

** Sample weight after added time and re-dry.

$$\text{Standard Deviation} = \sqrt{\frac{\Sigma D^2}{n-1}}$$

	weight mg	ppm		D^2	Standard Deviation
	a 9.9	9.19	-.21	.0441	
	b 5.7	9.61	+.21	.0441	
	Avg	9.40			.297
	a 41.9	9.09	+.16	.026	
Q_2	b 25.2	9.15	+.22	.149	
	c 4.57	7.22	-.71	.50	
	d 3.89	7.24	-.69	.48	
	Avg	7.93			.912
	S 3.8	8.75	+.48	.230	
$Q_{3.5}$	La 13.0	8.33	-.14	.020	
	Lb 21.5	8.13	-.34	.1156	
	Avg	8.47			.428
	d				
Q_1	a 2.3	9.21	-.04	.0016	
	b 2.3	9.29	+.04	.0016	
		9.25			.057
	S 10.9	8.63	+.17	.03	
$Q_{1.5}$	La 8.5	8.40	-.06	.0036	
	Lb 4.7	8.34	-.12	.0144	
		8.46			.155